DOCUMENT RESUME

ED 420 062 CS 216 351

AUTHOR Beaver, Melanie
TITLE The Effects of a Language Arts Block on Student Achievement.
PUB DATE 1998-07-10
NOTE 20p.
PUB TYPE Reports - Evaluative (142)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Comparative Analysis; Educational Research; Elementary Education; *Instructional Improvement; *Language Arts; *Reading Achievement; *Scheduling; Scores; Statistical Analysis; *Student Improvement
IDENTIFIERS *Indiana Statewide Testing for Educ Progress; Vigo County School Corporation IN

ABSTRACT

A study examined the effects of scheduling a language arts block at West Vigo Middle School (Indiana) in the 1993-94 school year in an attempt to show that ISTEP (Indiana Statewide Testing for Educational Progress) language arts and reading NCE (Normal Curve Equivalent) scores for eighth graders would increase. ISTEP scores for 1993 (before the block design was implemented) and scores for 1995 (after the block design was implemented) were found and compared using a computer program which calculated the mean and significance of the scores. Compared were 130 scores from 1993 and 126 scores from 1995. Results indicated that significant gains were noted in language arts NCE scores and also in reading NCE scores. (Contains a graph, two tables of data, and seven references; appended are six pages of ISTEP score information.) (Author/CR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 420 062

The Effects of a Language Arts Block on Student Achievement

by: Melanie Beaver

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
M. Beaver
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

CS216351

ABSTRACT

This study attempted to show that as a result of scheduling a language arts block at West Vigo Middle School in the 1993-1994 school year, ISTEP language arts and reading NCE scores for eighth graders increased. ISTEP scores for 1993 (before the block design was implemented) and scores for 1995 (after the block design was implemented) were found and compared using a computer program which calculated the mean and significance of the scores. Significant gains were noted in language arts NCE (Normal Curve Equivalent) scores and also in reading NCE scores.

BACKGROUND

Language arts and reading test scores of students in the United States have been declining for a number of years. This decline is of great concern to educators, parents, college admissions counselors, politicians, and employers. An emphasis on standardized test results continues to drive instruction. Pressure for higher test scores continues to be fueled by media, ranking schools and publishing scores (Routman, 1996). So the cycle of blame and mending begins.

Employers want to hire applicants who can communicate effectively. Speaking, reading, writing, and listening are the communication skills needed to be a worthy employee. Unfortunately, employers are finding deficiencies in one or all of these areas. Most parents place great value on the communication skills obtained in language arts classes. Parents recognize that the abilities of speaking, reading, and writing are essential to developing productive citizens and responsible adults. In turn, employers and parents lobby politicians to scream "the three r's" and "back to the basics" in their platforms as a resolution to the growing problem. Consequently, funds, programs, and concepts are trickled down through the school corporations as a band-aid for the wound that bleeds these gross deficiencies in students' abilities to read and write. Unfortunately, and as history once again repeats itself, when these attempted remedies are evaluated, it is found that they fell short of bringing students up to grade level expectancies. And so the pendulum of education swings.

Employers support the current emphasis on addressing the deficiencies in communication skills. In an interview, Shoemaker, a human resource specialist, noted that many job applicants have problems communicating

effectively. Skills such as speaking, following written and oral directions, and even penmanship are clear indicators that an applicant's communication skills are below standard. Shoemaker noted that an applicant lacking computer skills can receive training, an applicant lacking computation skills can receive training and practice, yet an applicant lacking in simple communication skills is an instant burden to the employer and can only cause problems for the team, shift, or company for which he works (1998). It seems evident that the professional world expects the schools to equip students with the necessary skills to speak, read, and write effectively. This is a charge that school administrators should not take lightly.

One concept that has been desired by many and implemented by few is the increase of time in the school day spent studying language arts. Inclusive in the realm of teaching language arts are many components: writing (composition, process writing, writing styles and forms, writing for various audiences, etc.), speaking (preparing and delivering speeches, debating, etc.), reading (various types of literature, author studies, comprehension, etc.), and the list goes on. One rationale for increasing the time spent in language arts is that there is simply so much to be covered in such a short period of time. A second rationale recognizes that communication skills are essential for all people at all levels of socioeconomic status; therefore, schools should logically be allotting more time for these skills. Effective communication skills affect a person professionally, privately, academically, and socially. These are the skills that affect all people in all areas of careers or expertise. Statistics show that the more time a student spends reading the better he is at reading. The same applies for speaking and writing. Graves believes that students learn by reading and writing in school for extensive amounts of time. Unless increased time is spent reading and writing, students will not

understand what reading and writing are for or gain the skills necessary to become independent learners (1991).

Furthermore, it is well documented in the research that children do straight reading for only 4 - 6 minutes in the common reading hour. If children learn to read by actually reading and learn to write by writing, it is obvious that here is where schools are failing them. It is recommended that children spend 30 - 40 minutes every day in concentrated, uninterrupted reading, and likewise with writing (Graves, 1991). Hancock and Hill also argued that time must be provided for children to read at school. If readers are going to develop their reading skills and a love of reading, then they do need to have uninterrupted time to read (1987). A similar study by Routman (1996) highlights that caution must be taken to spend most of language arts time reading and writing authentic texts. Again, more time should be spent reading. Research shows that children who spend a great deal of time reading (both for pleasure and purpose) have higher test scores in comprehension, vocabulary, and expression than those who spend less time reading (Routman, 1996).

Most researchers on the topic conclude that more time should be spent reading and writing, because the skills obtained in language arts are called upon in every discipline. The concept of more time on task is greatly campaigned and supported by teachers; however, so much must be covered in the small amount of time students currently spend in language arts classes.

In the 1993-1994 school year at West Vigo Middle School in West Terre Haute, Indiana, more time was allotted in the schedule for language arts and reading. The typical forty-five minute class period in which the all-inclusive language arts curriculum was taught for so many years was doubled to ninety minutes of time for language arts. Six, seventh, and eighth grade

students at West Vigo Middle School would have one forty-five minute period for English and one forty-five minute period for literature. Ideally, the same group of students would be taught by the same teacher. Mr. Gene Lowe, principal at West Vigo Middle School, felt that more time spent learning reading and writing skills would result in higher test scores on the annual standardized test (1998). Teachers at WVMS believed that as of the 1993-1994 school year, when the language arts block was implemented, they could finally have the time to teach the Vigo County language arts curriculum to mastery rather than a brief exposure of the components. One teacher metaphorically noted that she was relieved to finally be able to cover the mile-wide curriculum a mile deep, rather than only being able to cover the mile-wide curriculum an inch deep (Farver, 1998).

As budget crunches come and go and test scores continued to be levied as a pecking order for schools, programs such as the language arts block at West Vigo Middle School continue to be evaluated for effectiveness. Questions remain to be answered as to whether or not test scores and achievement have increased as a result of the language arts block at West Vigo Middle School. If increased time spent in language arts classes improves students' achievement in language arts and reading, then students at West Vigo Middle School should have higher achievement scores. This study looks at this statement.

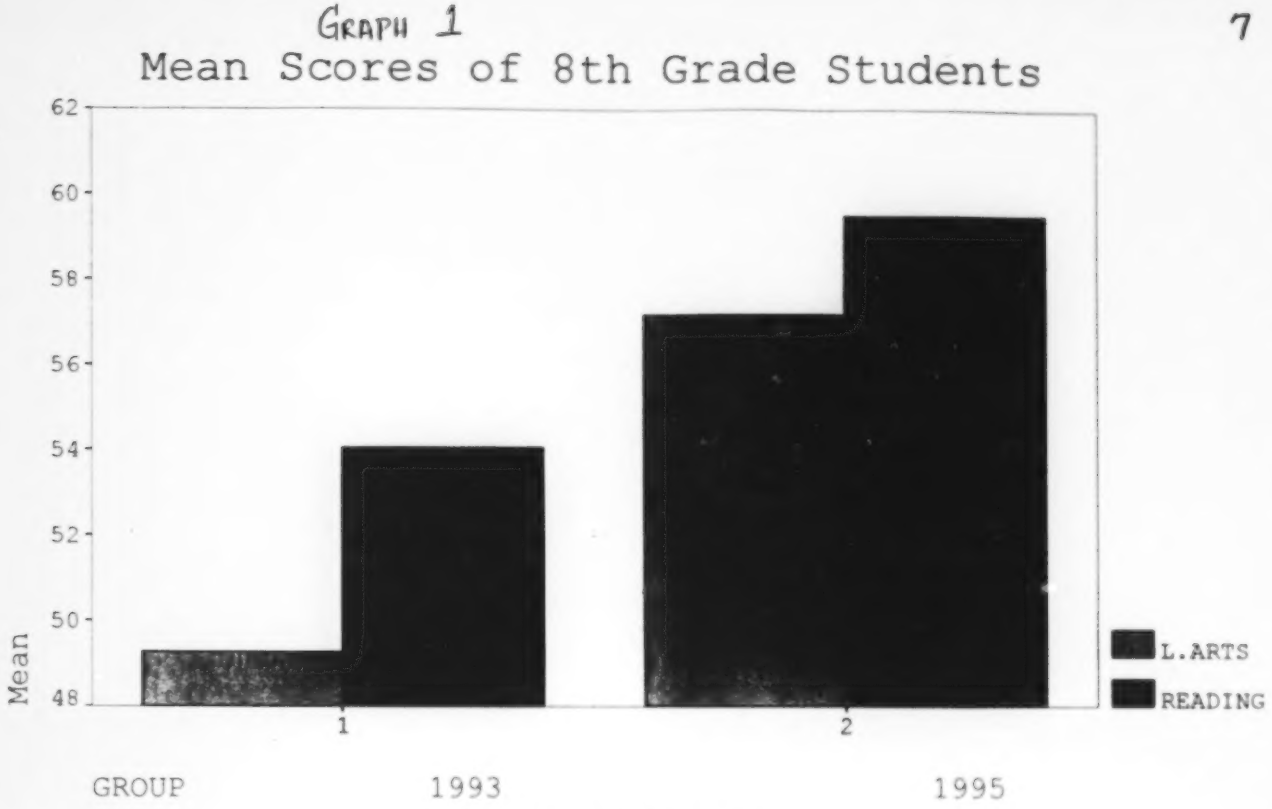
STATEMENT OF THE PROBLEM

How can student achievement in language arts and reading comprehension be improved? Would student achievement in these areas improve with increased time spent in language arts classes? One way to examine these questions is to look at the language arts and reading test scores before the implementation of the language arts block at West Vigo Middle School and the test scores after the block implementation. Does a relationship exist between increased time spent learning language arts/reading skills and student achievement?

The following directional hypothesis was tested in this study:

***Language arts and reading test scores will be higher after the implementation of block language arts scheduling at West Vigo Middle School.**

GRAPH 1



METHODOLOGY

This study used standardized test scores of eighth graders at West Vigo Middle School in West Terre Haute, Indiana for the years 1993 and 1995. Normal Curve Equivalent (NCE) scores in the language arts and reading segments of the ISTEP taken by all eighth graders at WVMS in both years were used. Because of the size and nature of this sample, it could reasonably be concluded that this sample is representative of the students found in public middle schools in this country.

This study had a one-tailed non correlated design, requiring a T-test to be performed on the scores used. A computer with the SSPS (statistical analysis) program was the only piece of equipment needed to complete this study. One hundred thirty test scores were used for the test year of 1993 and one hundred twenty-six scores were looked at from the testing year of 1995.

For the language arts scores, the mean for 1993 (group 1) was 49.2846 and the mean for 1995 (group 2) was 57.2143. A t-test was performed and the results of the t-tests were -3.68, which means these results were significant at the .01 level.

For the reading scores, the mean for 1993 (group 1) was 54.0769 and the mean for 1995 (group 2) was 59.5317. A t-test was performed and the results of the t-tests were -2.34, which means these results were significant at the .01 level (see figure 1, above).

RESULTS

The mean scores and standard deviations of language arts and reading scores for the year 1993 and 1995 are shown in table I (below). Graph 1 (see Methodology) provides graphical representation of the mean scores, also provided in table I. The graph shows only the mean scores for both areas in both years, while table I shows both the mean scores and the standard deviation. The labels of groups one and two represent the test score years of 1993 and 1995, respectively.

Table II shows the statistical analysis of the hypothesis. The t-value and significance of the Language Arts scores are shown on the first line, while the t-value and significance of the Reading scores are shown on the second line.

One hundred thirty test scores were used from 1993 to compute the one tailed non-correlated t-test, and one hundred twenty-six scores were used from 1995. Scores used from both years were from the ISTEP tests of eighth graders at West Vigo Middle School in West Terre Haute, Indiana.

As a result of the t-tests performed, a -3.68 t-value was found in the Language Arts scores, while a -2.34 t-value was found in the Reading scores. Both resulted in a significance at the .01 level. Therefore, the null hypothesis is rejected and this positive relationship between time spent in language arts and increased achievement was expected and paralleled the hypothesis.

TABLE I

Results of the Study

	1993 (Group 1)		1995 (Group 2)	
	Mean	SD	Mean	SD
L.Arts	49.2846	17.64	57.2143	16.77
Reading	54.0769	18.97	59.5317	18.31

TABLE II

Statistical Analysis of the Hypothesis

Compare	t	Significance
Language Arts	-3.68	.000
Reading	-2.34	.020

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The relationship found between time spent studying the language arts/reading skills and ISTEP scores were expected. The results found were significant and did not cause the hypothesis to be rejected. Several factors could have caused these results.

One factor that could have had an effect on the expected results was the sample used in the study. The data was collected from eighth graders' test scores in two different years. It could be assumed that the group of eighth graders who took the test in 1995 were significantly brighter, as a group, than the test takers from 1993. The study might suggest that the language arts block implemented during the 1993-1994 school year at West Vigo Middle School was the sole reason for the increase in student achievement. However, the previously suggested situation could be true. If so, test scores would have improved with or without the language blocks implementation. For this reason, the results of this study could produce misleading results.

Another factor that could impede the results of this test is the hiring of new language arts teachers during this implementation. In the school year beginning 1994, significant changes were made in teacher placements, from grade level changes, to subject area changes, to new-hires. As a result of different or more effective teaching strategies, test scores could have increased.

Finally, in order to effectively assess the worth of the language arts block program at West Vigo Middle School, this study should be repeated with a different sampling method. One suggestion is to change the sampling or subgroups used. This could be done by comparing the language arts/reading scores of West Vigo Middle School to a similarly-sized school that does not have the language arts block.

BIBLIOGRAPHY

Farver, Marilyn. (1998). Teacher, West Vigo Middle School. Personal Interview.

Graves, Donald. (1991). Build A Literate Classroom. Irwin Publishing.

Graves, Donald. (1989). Discover Your Own Literacy. Irwin Publishing.

Hancock, Joelie and Susan Hill. (1987). Literature-Based Reading Programs at Work. Heinemann Educational Books.

Lowe, Gene. (1998). Principal, West Vigo Middle School. Personal Interview.

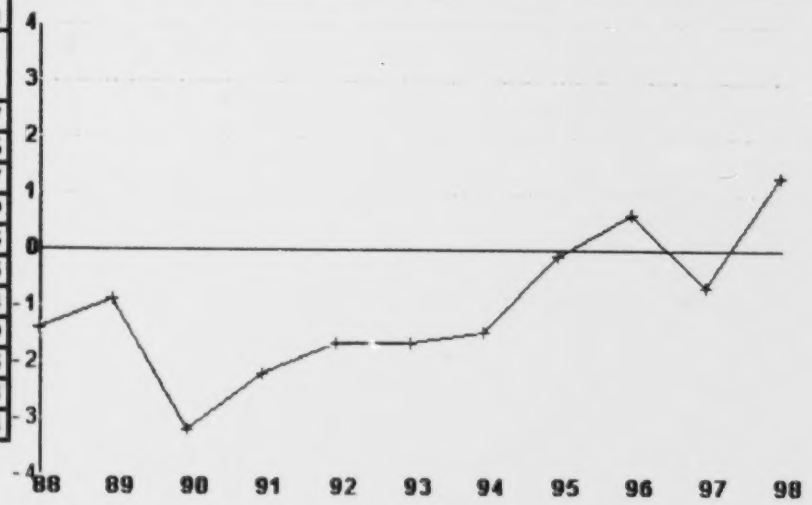
Routman, Regie. (1996). Literacy at the Crossroads. Heinemann Educational Books.

Shoemaker, Dawn. (1998). Human Resource Specialist, DADC, Terre Haute, IN. Personal Interview.

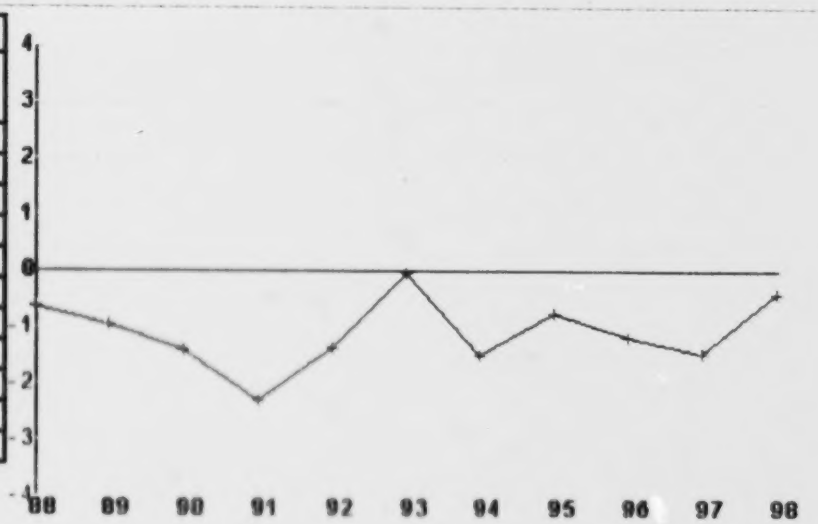
APPENDIX

8461*West Vigo Middle School*West Terre Haute

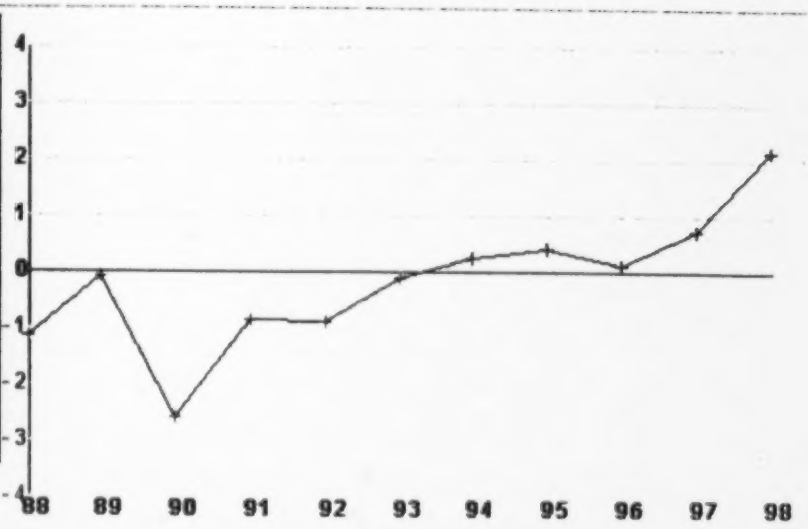
Language Expression	
year	Std Dev
1987-88	-1.37
1988-89	-0.86
1989-90	-3.17
1990-91	-2.19
1991-92	-1.65
1992-93	-1.65
1993-94	-1.44
1994-95	-0.09
1995-96	0.65
1996-97	-0.63
1997-98	1.34



Language Mechanics	
year	Std Dev
1987-88	-0.59
1988-89	-0.92
1989-90	-1.38
1990-91	-2.28
1991-92	-1.34
1992-93	-0.03
1993-94	-1.47
1994-95	-0.73
1995-96	-1.14
1996-97	-1.42
1997-98	-0.38

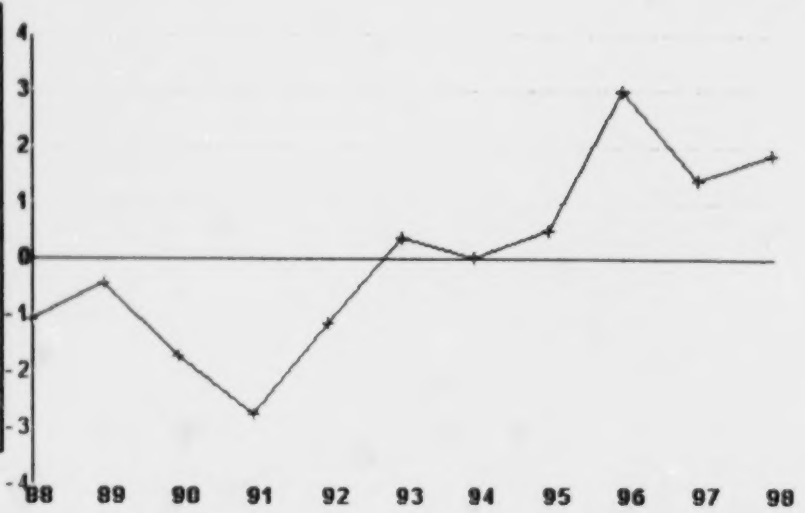


Reading Comprehension	
year	Std Dev
1987-88	-1.12
1988-89	-0.05
1989-90	-2.56
1990-91	-0.81
1991-92	-0.87
1992-93	-0.08
1993-94	0.29
1994-95	0.45
1995-96	0.16
1996-97	0.75
1997-98	2.17

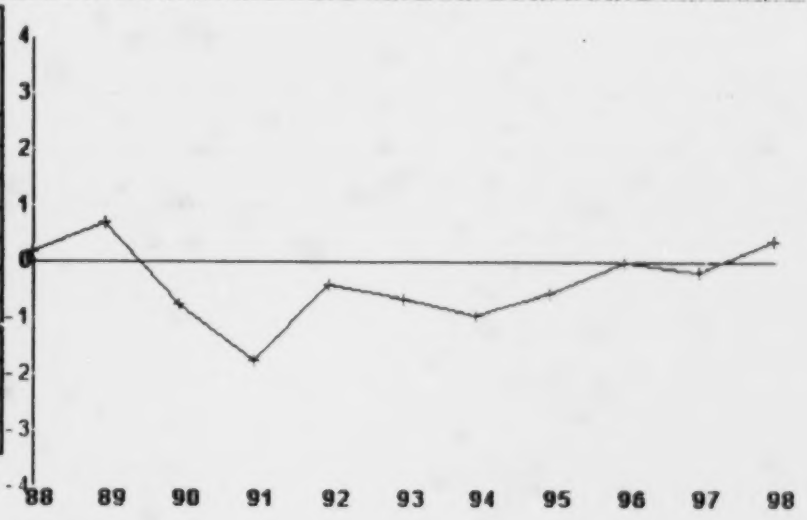


Performance on achievement tests is predicted from Socio-Economic Status (pct students not participating in free lunch program) and Average Cognitive Skill (measurement of student's ability to learn). The amounts above or below predicted are standardized relative to all Indiana schools of similar type(Elementary, Middle Jr High, High School).

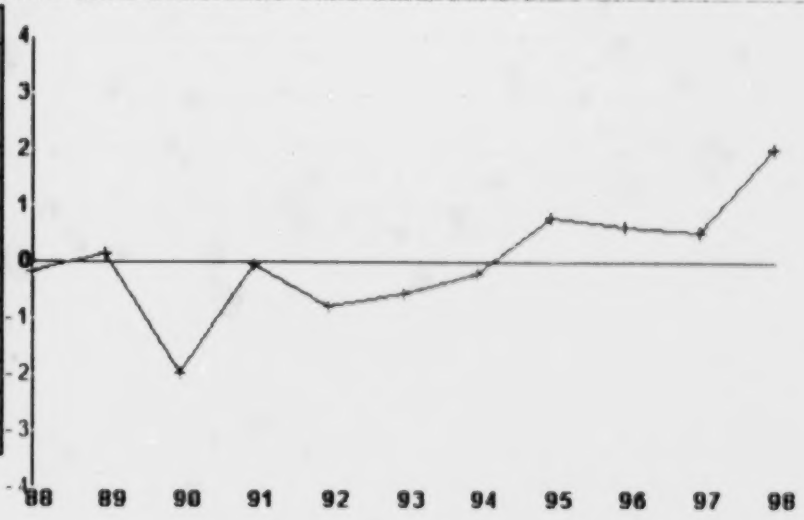
Math Concepts & Appl.	
year	Std Dev
1987-88	-1.04
1988-89	-0.41
1989-90	-1.69
1990-91	-2.74
1991-92	-1.10
1992-93	0.41
1993-94	0.05
1994-95	0.53
1995-96	3.04
1996-97	1.42
1997-98	1.89



Math Computation	
year	Std Dev
1987-88	0.23
1988-89	0.71
1989-90	-0.74
1990-91	-1.71
1991-92	-0.36
1992-93	-0.64
1993-94	-0.94
1994-95	-0.55
1995-96	-0.00
1996-97	-0.14
1997-98	0.40



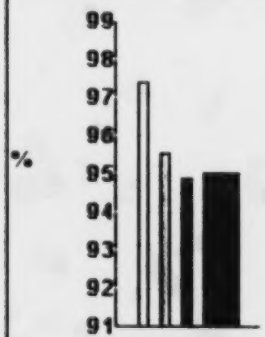
Vocabulary	
year	Std Dev
1987-88	-0.16
1988-89	0.19
1989-90	-1.95
1990-91	-0.03
1991-92	-0.75
1992-93	-0.54
1993-94	-0.20
1994-95	0.82
1995-96	0.65
1996-97	0.56
1997-98	2.04



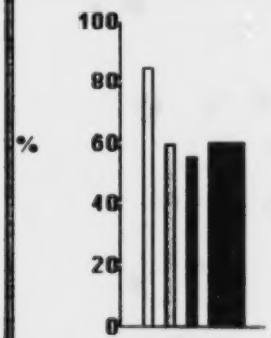
West Vigo Middle School, West Terre Haute #8461

Data are preliminary. The official report will not be available until August 1st 1998.

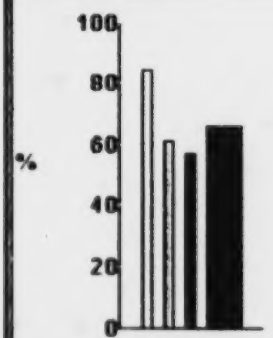
Attendance Rate	
95th Percentile	97.3
State Average	95.5
Predicted	94.8
Actual	95.0



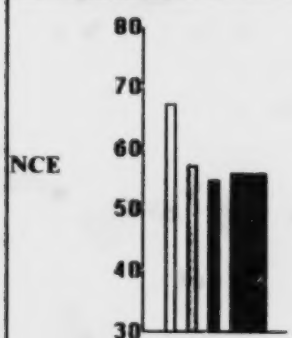
Grade 6 Pct Passing ISTEP Math Standard	
95th Percentile	84
State Average	59
Predicted	55
Actual	60



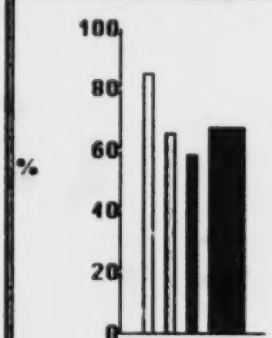
Grade 6 Pct Passing ISTEP Language Arts Standard	
95th Percentile	84
State Average	61
Predicted	57
Actual	66



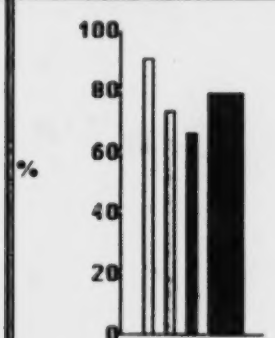
Grade 6 ISTEP Total Battery NCE	
95th Percentile	67.1
State Average	56.8
Predicted	54.5
Actual	55.6



Grade 8 Pct Passing ISTEP Math Standard	
95th Percentile	85
State Average	65
Predicted	58
Actual	67



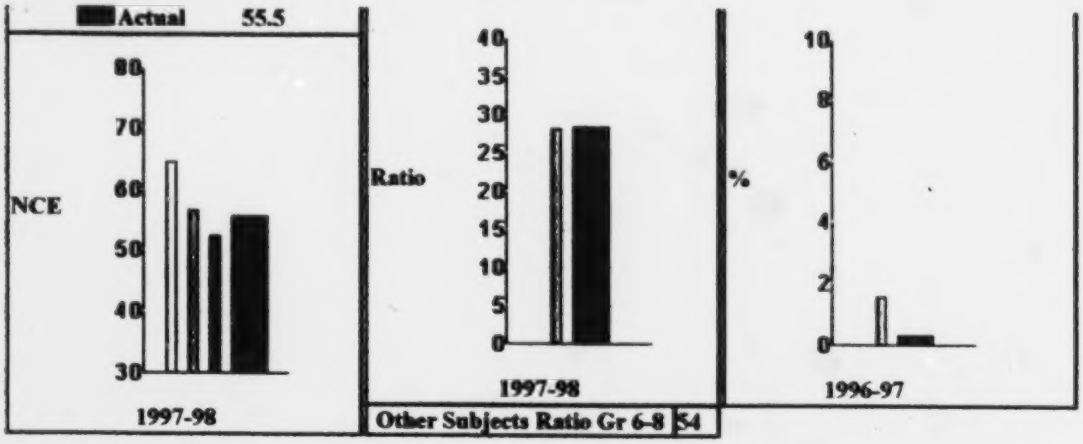
Grade 8 Pct Passing ISTEP Language Arts Standard	
95th Percentile	90
State Average	73
Predicted	66
Actual	79



Grade 8 ISTEP Total Battery NCE	
95th Percentile	64.5
State Average	56.2
Predicted	52.1

Students per Teacher Core Subjects Grades 6-8	
State Average	28
Actual	28

Pct of Expulsions and Suspensions For Drugs, Weapons or Alcohol	
State Average	1.5
Actual	0.3


Actual 55.5
NCE
80
70
60
50
40
30
1997-98
Ratio
40
35
30
25
20
15
10
5
0
1997-98
%
10
8
6
4
2
0
1996-97
Other Subjects Ratio Gr 6-8 54

t-tests for Independent Samples of GROUP

Variable	Number of Cases	Mean	SD	SE of Mean
L.ARTS				
GROUP 1	130	49.2846	17.641	1.547
GROUP 2	126	57.2143	16.767	1.494

Mean Difference = -7.9297

Levene's Test for Equality of Variances: F= .404 P= .526

	t test for Equality of Means				95%
Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-3.68	254	.000	2.152	(-12.168, -3.691)
Unequal	-3.69	253.90	.000	2.151	(-12.165, -3.694)

Variable	Number of Cases	Mean	SD	SE of Mean
READING				
GROUP 1	130	54.0769	18.367	1.664
GROUP 2	126	59.5317	18.314	1.632

Mean Difference = -5.4548

Levene's Test for Equality of Variances: F= .086 P= .770

	t-test for Equality of Means				95%
Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-2.34	254	.020	2.331	(-10.046, -.864)
Unequal	-2.34	254.00	.020	2.330	(-10.044, -.866)

BEST COPY AVAILABLE